Electronic Logbook at SLAC
Matt Gibbs
Outline

• History of the E-Log at SLAC
• Some interesting features
• Problems with the E-Log
History
E-Log, circa 2005

**SLAC ELOG**

<table>
<thead>
<tr>
<th>Logbooks:</th>
<th>ACCELERATOR</th>
<th>PEP</th>
<th>MCC</th>
<th>NCTA</th>
<th>8-PACK</th>
<th>RF</th>
<th>BIC</th>
<th>SPPS</th>
<th>SW_LOG</th>
<th>TLOG</th>
</tr>
</thead>
<tbody>
<tr>
<td>actions:</td>
<td>Make an Entry</td>
<td>Logbook prefs</td>
<td>Scrollable/printable logbook</td>
<td>Pending entries</td>
<td>Login</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other Links:
ELOG News (last updated 12/17/2003)  
ELOG Users Guide  
SLAC homepage

<table>
<thead>
<tr>
<th>Start Date:</th>
<th>October 10, 2003 0:00</th>
<th>End Date:</th>
<th>October 17, 2003 0:00</th>
</tr>
</thead>
</table>
| Logbook:    | ACCELERATOR  
             | PEP  
             | MCC  
             | NCTA  
             | 8-PACK  
             | RF  
             | BIC  
             | SPPS  
             | SW_LOG  
             | TLOG |
| Area:       | ALL  
             | Sort Order: DESCENDING  
             | Source: ALL LOGS |
| Search(?)   | in Titles and Text  
             | Apply Filters  
             | Default Settings |

<table>
<thead>
<tr>
<th>number</th>
<th>date</th>
<th>name</th>
<th>area(s)</th>
<th>title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1080</td>
<td>16-Oct-03 00:35</td>
<td>Kubler, Krist</td>
<td>Parking HER RF 8-5</td>
<td></td>
</tr>
</tbody>
</table>

Database query + PHP page generation time = 0 seconds  
result set has 1 records
E-Log, circa 2008

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Name</th>
<th>Area(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/19</td>
<td>phasing TCAV for slice meas</td>
<td>E_Tse</td>
<td></td>
</tr>
<tr>
<td>06/19</td>
<td>Having trouble with TMIT in TCAV region, mig...</td>
<td>A_Egger</td>
<td>FACET</td>
</tr>
<tr>
<td>06/19</td>
<td>SUBST 29 switch-tubes being replaced--bypass...</td>
<td>T_Sommer</td>
<td>LCLS</td>
</tr>
</tbody>
</table>
E-Log, today

<table>
<thead>
<tr>
<th>Flags</th>
<th>Time</th>
<th>Title</th>
<th>Name</th>
<th>Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10:59</td>
<td>Having trouble with TMIT in TCAV region, might be clipping?</td>
<td>A_Egger</td>
<td>FACET</td>
</tr>
<tr>
<td>s</td>
<td>10:51</td>
<td>Updated BSY BPM scale factors and offsets</td>
<td>S_Hoobler</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:16</td>
<td>21-8 and 25-2 NIRP tests are done</td>
<td>T_Sommer</td>
<td>LCLS</td>
</tr>
<tr>
<td></td>
<td>10:52</td>
<td>Lines temperature alarm limits can now be changed from the</td>
<td>S_Hoobler</td>
<td></td>
</tr>
</tbody>
</table>
A Few Novel Features
Quick Entry Button

• Create an entry without leaving the logbook page

• Only the essentials - text and title.
AJAX Loading

- New entries are automatically loaded without refreshing the page
- Full entries and their attachments are loaded on-demand - speeds up loading, and saves bandwidth.
AJAX Performance

Viewing one week’s worth of entries:

<table>
<thead>
<tr>
<th></th>
<th>Page load time</th>
<th>Data Transferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without AJAX</td>
<td>24.7 seconds</td>
<td>7.25 MB</td>
</tr>
<tr>
<td>AJAX</td>
<td>3.1 seconds</td>
<td>636 KB</td>
</tr>
</tbody>
</table>
Automatic Entry Classifier

• Based on the title and text of an entry, determines which accelerator you are talking about.

• Naive Bayes Classifier
iOS Client

- Native app
- Full functionality: read and write entries, search, create follow-ups, the works!
Demo
Problems
Awful User Preferences

• Typical use varies greatly from user to user, so defaults don’t please everybody.

• Logbook preferences are not very powerful, most defaults can’t be changed.

• Preferences are stored per computer, not per user.
Group-Specific Features Are Hard

- Logbooks are hard to customize for different groups.
- Shifts start at different times
- Not all features are relevant to all groups.
Unfriendly Interface

- Interface is not easy to learn, and some features are hard to discover.
- Confusing conventions - ‘LCLS’ is a logbook and an area.
Frightening Codebase

- 35999 lines of code, spread out among 201 files
- Almost no structure to the files
- Hard to maintain, hard to modify
End